

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

19. *Aphasia*.—From an instructive paper on aphasia, in the *Revue des Deux Mondes*, M. CH. RICHER, we take the following remarks.

It is probable that, between the organ of thought and the vocal organ, there is a third, the organ of speech (*parole*); it is the lesion of this which constitutes aphasia. Certain authors, however, have held that aphasia does not exist; that the case is sometimes that of a loss of memory, sometimes that of destruction of the intellect. It is fitting that we should examine these two objections (though the problems relate rather to psychology than to physiology).

In the memorable discussion which took place in the Academy of Medicine, M. Piorry affirmed that aphasia was merely *verbal amnesia*; and so it was useless to make the faculty of language something special. It appears, however, that memory itself is not a faculty which can be distinctly defined. One cannot conceive a thinking being who has no memory; it is the basis of all our actions, and above all, of our ideas; whenever the mind thinks it makes use of anterior thoughts, and cannot separate itself from them. We identify ourselves, so to speak, with the notions we have acquired, and to separate the memory from the intellect can only be an analytic process, excellent for study, but impossible to accomplish in reality. It might be said, then, that there are different memories, applying to all the objects that we know, but that there is not a single memory. We see, indeed, that nothing is more capricious than memory. It is a common fact that each individual, according to his aptitude, retains certain things much more easily than others. One can recall verse, who is unable to retain prose; another will have the memory of figures, another, that of places; and yet we should not make, for figures, places, verse, or prose, a special faculty. It is quite otherwise with language, and if language be a memory, it is a memory so special, and has reached such a development in the life of individuals and the history of humanity, that it does not seem legitimate to confound it with other memories. For the rest, we find, from a study of aphasia, that it is produced specially; the aphasic play at chess and at cards, are interested in their affairs, understand them, discuss them, after their own manner, by multiplied forms of gesture, and a mimic language which they vary extensively. It is of little consequence if you call aphasia verbal amnesia; it would be sufficient to recognize that the verbal memory is a particular faculty, capable of being injured while the other faculties remain intact. But we will not even make this concession to the opinion of M. Piorry. Do we not see that the aphasic person who incessantly repeats *cousin*, and cannot say either *cou* or *sisi* separately, has lost something else than memory? The aphasic woman who said "*Bonjour monsieur*," every second, could never say "*Monsieur bonjour*"; yet she retained the memory of the two words.

It is not necessary, indeed, to believe that all the faculties of the intellect are continually submitted to the will. There is a certain amount of *automatism*, more or less similar to what the physiologists of our age have called *reflex action*. We may, from the theoretical point of view, consider the nervous system as constituted of a sensitive cell, into which enters a sensitive nerve, and which is connected with a motor cell, whence issues a motor nerve. When the sensitive nerve is excited, by pinching or the like, the excitation is transmitted to the motor cell which makes a muscle contract, by means of the motor nerve. In this case will, intelligence, consciousness have no part in the production of the motion; it is a fatal, an unreflecting action. . . . It is by reflex action that all those automatic and involuntary actions can be produced, that form three-fourths of human life. Thus when we take a walk we may think of anything else. Our intellect is not distracted by the movements we make, nor occupied with willing to walk. We are in this respect veritable automata: the step we take provokes a second step, and reflection does not act. M. Onimus has rightly compared language to the automatic functions of walking, of dancing, of playing on instruments. Certain observations of aphasia are very

interesting from this point of view. A patient to whom some one had said "How does that do?" replied, "It does very well." A few seconds afterwards he could not repeat this phrase. In such cases the patients speak quickly, as if they were afraid of forgetting.

From these examples we see that there are in language various elements; the memory of words, the arrangement of phrases, and that automatic part which permits of our speaking without effort. There is a fourth element which has considerable importance; I mean the intellect. It is impossible to regard aphasia as a total disturbance of the intellect; that is not destroyed when the faculty of language is abolished. A musician, having become aphasic, may write the notes of an air which he has heard sung. It is true, he may not be able to write a single syllable, yet he will write the music as if he were quite without disease. Can any maintain that the intellect of the man is destroyed?

Still, it must be admitted that the intellect, in the aphasic, is often gravely affected. Professor Rostan could no longer comprehend the *Entretiens littéraires* of Lamartine, and Lordat suffered all his life from the lesion of his intellectual region. From having been an orator and improvisator of the first order, he became, after his temporary aphasia, incapable of speaking in public. He read his lectures, and could no longer improvise. Nearly all the aphasic are weak-minded; they have ideas more or less infantile; the merest trifles make them laugh or cry. Material concerns, their meals, and their sleep, interest them before anything.—*London Med. Record*, Aug. 5, 1874.

20. *Pulsation of the Subclavian as a Sign of Superior Dilatation of the Aorta.*—Dr. A. FAUVRE writes (*Archives Générales*) that, contrary to what is observed under normal conditions, there may be noticed in certain cardiac affections peculiar pulsations in the carotid region, and at the base of the neck. That these pulsations originate in the passage of the blood-current through a large artery—the subclavian—may be shown in two ways: first, by placing the finger back of and below the tubercle of the scalenus anticus muscle, when this artery will not be found in its usual position; then by making compression over the seat of pulsation, when the pulse at the wrist is affected. If, on making this compression over the misplaced subclavian, the arterial walls be lightly impressed by the finger, a double vibratory tremor may be remarked. The first and most intense part of this is systolic, and is evidently produced by the rapid centrifugal passage of the blood-current. The second, of variable intensity, is caused by the return of the blood towards the heart; it is sometimes wanting.

Auscultation over the seat of pulsation demonstrates the existence of a double blowing murmur, evidently connected with the vibratory tremor above mentioned. The second part of this murmur is wanting when the second part of the tremor is absent.

In a number of necropsies of such cases, the existence of aneurism affecting the superior wall of the aorta has been ascertained. In these cases the subclavian is found displaced, and overlapping to a certain degree the omo-hyoid muscle. It is at first uncovered behind the clavicle, and then becomes more superficial. Finally, it is sinuous—that is, too long for its channel.

The double tremor and murmur appear to be independent of any abnormal condition of the aortic orifice. The fact appears to be that the walls of the dilatation, true or aneurismal, having lost their elasticity, allow themselves to become distended under the influence of the ventricular wave at the same time as the arterial system. But, owing to the impulsive force of the heart having been exhausted by the inertia of these walls, the arterial tension is lessened.

The diastolic reflux of a part of the contained blood results of necessity from this unequal subdivision of the blood-tension. It is the centripetal reflux which determines the diastolic murmur. The displacement of the subclavian is evidently due to elevation of the superior wall of the aorta. It is shown in the shortening of the course of the carotid and other vessels given off, causing them to become sinuous, and thus to give rise to the pulsations noted. If the aortic dilatation be equal over all parts whence the great vessels are given off,

the various phenomena alluded to will be observed equally on both sides of the neck. If, on the contrary, it be greater near the aortic origin, or on the other extreme of the arch, pulsation, etc., will only be observed on the affected side.

We have here, then, a valuable aid in the diagnosis and prognosis of superior aortic aneurism. For not only may the extent and position of the enlargement be ascertained approximately, but, if in the progress of the case the vibration and murmur should disappear, we may hope that the aneurismal pouch is being filled with clots.—*London Med. Record*, June 10, 1874.

21. *Aneurisms developed upon Branches of the Pulmonary Artery bordering upon Caverns.*—In the *Progrès Médical* there is an interesting paper on this subject. The branches of the pulmonary artery which ramify in the walls of caverns in phthisical subjects are most frequently obliterated. This is a point upon which all authors since the time of Laennec insist, and upon which the researches of Nat. Guillot have more particularly thrown light. In some cases, however, these vessels remain permeable, but undergo in a localized point a histological modification, as a consequence of which they become dilated, and there can then be found a small aneurism projecting into the cavern.

These cases are relatively rare, but many facts recently presented to the Anatomical Society lead us to think that by more rigorous search they would more frequently be discovered. In all the cases where it has been studied, the process appears to have been the same; it can be summed up thus: denudation of the vessel over a limited point, endarteritis in the embryonic transformation of the wall at this level; then simple dilatation or aneurism; lastly, most frequently rupture of this aneurism. The vessels injured by this alteration are not the capillaries; their calibre has varied from a half to three millimètres. They were generally parallel to the cavern; in M. Lepine's case the artery was perpendicular. The hæmoptysis following the rupture has generally been very abundant, and has almost always been followed by rapid death; in some cases, however, the hemorrhage has ceased and the patients have not immediately succumbed, and it has been possible to find at a later period the orifice obliterated by clots of blood of different ages. Occasionally there appears to have been at several times successive ruptures and obliterations. According to Powell these aneurisms are developed especially in cases of torpid (quiescent) phthisis, where they exist on one side only of old caverns; and, on the contrary, the hemorrhage from simple erosion of the vessel will be rather the result of the active process of rapid phthisis.

Again, in the two cases, this change in the vessel would not be in any wise possible unless it were by one single point in its surface adherent to the diseased pulmonary tissue, the chances of obliteration being, on the contrary, much greater if the entire vessel dip into the morbid product.

An examination of the observations shows indeed, that in the majority of cases the pulmonary tissue over the wall of the vessel opposite the aneurism is almost healthy; but as to the first point, if there are many facts in favour of the phthisis being evidently chronic, there are others absolutely contradictory.

The rupture of these aneurisms is not forced, and although they have seldom been detected except after profuse hæmoptysis, it has been possible to discover those which had not burst. But if we expect that in the cases of extensive pulmonary alterations, the field of distribution of the pulmonary artery is more or less contracted, and that, as a consequence, the vascular tension ought to be there increased, if we add to that the feebleness of the wall of the vessels, we cannot be surprised that this rupture should be the most ordinary result. According to Jaccoud, it will also be more frequent or more early, if there does not generally exist in these cases a dilatation of the right auriculo-ventricular orifice, the result of which ought to be to diminish the volume of the sanguineous shower.

As for the occasional causes of the rupture they are unknown; however, it has appeared in some cases that the hæmoptysis has been preceded by a violent

fit of coughing, but we ought always to ask ourselves if the fit of coughing was not itself the first symptom of the hemorrhage.

It is very evident, again, that these cases cannot be foreseen, and up to this time they have never been diagnosed before the rupture; but if we observe at an advanced period of phthisis a profuse hæmoptysis to come on suddenly, we should consider it due to the rupture of an aneurism, and we ought not on that account to neglect to treat the patient; it will, quite on the contrary, be more formally indicated, to seek to arrest at once the hemorrhage, since we know that in certain cases the aneurism has been able to be obliterated by a clot of blood.—*London Medical Record*, July, 29, 1874.

22. *Gerhardt's Percussion-Sign of Change of Pitch*.—Dr. A. WEIL directs attention to a percussion-sign first described by Gerhardt in 1859, and apparently seldom or never taken advantage of in the physical examination of the chest, namely, change of pitch of the tympanitic (*tympanitisch*) note yielded by a circumscribed spot of the thorax with change of posture of the patient (*Berliner Klinische Wochenschrift*, 1874, No. 7). The author is careful to distinguish this phenomenon of change of pitch from two others which may present themselves under different circumstances. The first of these is "Wimtrich's change of pitch," and is familiar as the alteration of pitch occasionally observed over pulmonary cavities, according as the mouth, or the mouth and nostrils, are open or shut. The second is "Biermer's change of pitch;" it is related to the phenomenon which is the subject of the present paper, and depends upon the alteration in the length of the longer diameter of a cavity (with fluid and gaseous contents), by alteration of the posture of the patient.

Gerhardt's phenomenon appears to differ from that last described only in respect of the circumscribed area over which it is elicited. In explaining its rationale, Weil says that a tympanitic note occurring at a limited spot of the thoracic wall cannot possibly change in pitch with the posture of the patient, unless there lie behind the percussed spot a sonorous cavity the longitudinal diameter of which is diminished or increased with alteration of the patient's position. And such a lengthening or shortening cannot possibly occur unless there be present in the cavity not only air but a mobile fluid, which, in obedience to the laws of gravity, ever occupies the lowest place. In other words, Gerhardt's phenomenon depends upon the same principles as Biermer's does in pyo-pneumothorax, and indeed, may be said to be present when the sign described is elicited over a limited pyo-pneumothorax.

Two interesting cases are recorded in illustration, both ending in a confirmatory *post-mortem* examination.

Weil maintains that this phenomenon is more than an interesting sign of the exact architecture of a well marked cavern; it is available for the recognition of a cavern when other "cavernous signs" fail. Not one of these so-called signs is exactly pathognomonic, and this objection will not apply to Gerhardt's phenomenon should it be discovered. It indicates with certainty the presence of a somewhat large pathological cavity filled with air and fluid. Unfortunately, in the majority of caverns, all the conditions for the development of the sign are not present; the cavern may be more of a spherical shape, or its walls may be very irregular, or the fluid may not possess the necessary mobility; or there may not be the proper quantitative relation between the elastic and the fluid contents. Finally, the sign may vary in its occurrence from day to day.—*London Med. Record*, July 22, 1874.

23. *Changes in Shape of the Red Blood Cells in Septicæmia and Fever*.—The peculiar tendency of the red blood cells to assume an angular, indented, or thorny shape, which Huter describes as a specific sign of septicæmia, and explains as being caused by the entrance of monads into the substance of the red cells, has been found by ARNOLD HILLER not only in typhoid fever, but in all diseases attended with fever. The latter author strenuously denies that this change in shape of the red cells is at all characteristic of the blood of any disease, and says that it is in every respect identical with the change which

occurs from exosmosis in the cells of normal blood, which has become concentrated by evaporation, or the addition of substances, such as sugar, salt, or gum. The proneness of the red blood cells to undergo this change in fevers, may be explained by the presence in these diseases of circumstances which facilitate its occurrence, namely, 1, diminution of the consistence of the cells themselves; 2, increase of concentration of the serum, more effete matter being thrown off by the rapid metamorphosis of the tissues; 3, and a high temperature which aids the concentration after the removal of the blood.—*Irish Hospital Gazette*, July 15, from *Centralblatt*, No. 21 *et seq.*

24. *Diphtheritic Paralysis*.—Sir. JOHN ROSE CORMACK, in a paper read before the British Medical Association, began by describing a minutely observed, very severe, but typical case of diphtheritic paralysis. The main object of the paper was to elucidate the natural history of the affection, which he looked upon as the true guide to the prognosis and treatment of each case—so far as a guide exists irrespective of the individual peculiarities of the patient, and the character of the disease in respect of the district, season, and race in which it occurs, and the constitution of the prevailing epidemic, should the disease be prevailing as an epidemic. The most skilful physician cannot cure pneumonia, typhoid fever, or diphtheria; but he can guide to recovery many cases of these diseases which would be lost by the routine administrator of remedies. Medicines are sometimes exceedingly useful in diphtheritic paralysis, as well as in the earlier stages of diphtheria; but in each case, and in each epidemic, we find that the efficacy of particular remedies varies with the variation in the therapeutic opportunities. The author regarded a generous easily assimilated diet in all stages and forms of diphtheria as generally the basis of the treatment; ferruginous medicines were nearly always useful, but, like all other medicinal agents, they had their times for being given and for being withheld. In diphtheritic paralysis, the persistent use of local stimulants and small blistering bands (according to a method described) constituted, perhaps, the most valuable treatment. Electricity had its opportunities, and was sometimes most useful. Change of air, the douche, and short courses of nuxvomica, were agencies which frequently gave a start to a lagging recovery. Still, we must never lose sight of the fact that the paralysis has a definite career to run; and that if the patient were only to eat and drink well and digest his aliment, he will, at the end of a longer or shorter time, be restored to health—provided always, of course, that no insuperable obstacle to recovery exist, such as implication of the muscles of respiration in paralysis. In discussing the pathology of the affection, the author referred to recent German and Italian physicians who had described necropsies in cases of diphtheritic paralysis, in which they found a structural change in the gray and white matter of the medulla, which some of them have termed *disseminated myelitis*. The author looked on these appearances in the cases referred to as secondary. Diphtheritic paralysis, though it has its own peculiarities and specialities, is similar in kind to the paralysis which we meet with as a sequel of typhoid fever, relapsing fever, scarlatina, and dysentery. In all, it is peripheric. Its invariable starting point is the velum pendulum palati; and that is a distinctive peculiarity between it and the paralysis following typhoid fever, relapsing fever, scarlatina, and dysentery.—*Brit. Med. Journ.*, Aug. 29, 1874.

25. *Diphtheria*.—Mr. T. PRANGLEY read a paper before the British Medical Association, founded on the observation of fifty-six cases of diphtheria which came under his care at Aylsham during an epidemic which prevailed in the summer and autumn of 1868. The cases had been of all degrees of severity. He regarded the amount of engorgements of and deposit on the tonsils as a valuable prognostic sign; and said that one of the worst signs was the extension of the disease to the nares. The propagation of diphtheritic membrane to the larynx was also an ominous symptom. Regarding the treatment, he said that in every case he applied tincture of iodine (48 grains to 3j) locally to every part of the throat covered with membrane, at least once in every twenty-four hours, and also ordered the inhalation of iodine-vapour with steam. The

general treatment was supporting and stimulating. Of his fifty-six cases, seven died, five of whom were moribund when he first saw them.

Sir JOHN CORMACK said it was not safe to found our treatment of diphtheria only upon what we ourselves may have seen and done. A practitioner may have seen in some particular locality, or in some particular epidemics, nothing but recoveries; and, if he have applied iodine locally, and given zinc or iron internally, he may be inclined to attribute the successful issue of his cases to the treatment which he pursued. Unless he be as conversant with the experience of others as with his own, he may long slumber under his delusion; but the time may come to him, as it has come to others, when, in spite of his cherished remedies, local and general, he will see a large proportion of the attacked perish from croup, or be saved only by tracheotomy performed in good time. The use of local applications to the throat of a diphtheritic patient is fraught with infinite danger to the applier. Many medical practitioners and medical students have received the diphtheritic poison in the spit of their patients, involuntarily ejected on the application being made. Promising young physicians and some elder men—celebrities in medicine—have died of diphtheria so contracted. If we do apply anything to the throat, we can only do it with safety to ourselves if we wear a mask. But all potent applications to the throat have ceased to be in favour with those who have seen most of diphtheria. They say that iodine, nitrate of silver, and the like, generally produce increased exudation; while in other cases, where the exudative tendency is moderate, they seem to do little or no harm. The only local application now used by the author is the glycerole of borax of the *British Pharmacopœia*. It promotes the separation of the pellicle, and does not irritate the mucous membrane. The appearance of albumen in the urine is not of itself of evil prognosis. In many cases in which the urine has been intensely albuminous we have complete recovery. Diphtheria is essentially characterized by intermittence in the gravity of the symptoms: a lull, often mistaken for the dawn of convalescence, is not at all unusual. After such a lull, as a prelude to an exacerbation of symptoms, we can usually, by the thermometer, detect a rise in temperature, and a concurrent appearance or reappearance of albumen in the urine. Touching the differential diagnosis of simple membranous sore throat from the specific disease diphtheria, the author thought that it could neither be determined by the presence nor by the absence of fever, nor by any other than one test—a test simple and sure. Apply a small blister to the arm or elsewhere: if the case be diphtheria, the said surface will become covered with a diphtheritic pellicle; if it be not diphtheria, no false membrane will appear. Mr. Prangley, in reply, said that as regards the pulse, temperature, and urine, he could not get any information from them which was valuable in prognosis. He had, in some instances, tried for a time treating the cases without any local application, but as they became worse, he subsequently resorted to this mode of treatment. He could not agree with Dr. Bradbury that two diseases may coexist in the body. He thought it better to consider the two forms as one and the same disease, and to impress upon the friends the importance of mild cases.—*Brit. Med. Journ.*, Aug. 29, 1874.

26. *Croton-Chloral in Certain Forms of Megrim.*—Dr. SIDNEY RINGER read a paper on this subject before the Section of Medicine of the British Medical Association. He included under the term megrim the affections commonly known as sick headache, bilious headache, nervous sick headache, and hemicrania. He described the phenomena of an attack: and, with regard to its pathology, said that, though the affection was seated in the nervous centres, the frequency and severity of the attacks depended on peripheral exciting causes. The treatment included that of the central nervous affection; the removal or prevention of exciting causes; and the treatment of the paroxysm. Having referred to bromide of potassium as being often useful in a twofold sense, Dr. Ringer said that, remembering how closely megrim is allied to neuralgia, and how useful hydrate of chloral is in facial neuralgia, he had been induced to try this remedy in megrim, and had found it useful in cases of the continuous form.

Dr. Ringer further said that croton-chloral may be given in doses of five, ten,

or fifteen grains. He had given ten grains every hour for a fortnight without any unfavourable symptoms. He recommended five grains every three hours in ordinary cases of megrim, and the same quantity every two hours in severe attacks. With regard to the use of combination of drugs in megrim, he said he had found cannabis Indica, in conjunction with other drugs, the most useful form. Dr. Ringer had not found phosphorus successful.—*Brit. Med. Journ.*, Aug. 29, 1874.

27. *Subcutaneous Injection of Chloral in Spasmodic Asthma*.—Surgeon Major BAILLIE extols (*Indian Med. Gaz.*, June 1, 1874) the efficacy of chloral administered subcutaneously for the relief of spasmodic asthma, and records the following case in which it was used by Sub-Assistant Surgeon Nocoor Chunder Banerjee:—

"A scantily-clothed woman was carried into the dispensary one cold morning and deposited on the floor, her painful efforts to breathe absorbing all her attention, and rendering her quite unable to give any account of herself; from her friends it was learnt that she had been suffering for some weeks past from more or less difficult breathing which had culminated in the present most severe attack some twenty hours previously. Solution of chloral containing three grains in twenty minims of water, was at once injected subcutaneously at the back of the neck with so much advantage that, ten minutes later, the spasm had entirely ceased, and easy natural respiration had taken its place; the woman expressed her sense of the relief afforded her, and half an hour afterwards, walked off to her house with her friends; she was seen again a few days later, having remained quite free from the affection, and as she has not been heard of since, it is probable that the attack has not recurred.

"Several other cases of less severity than this have been also treated with equal benefit."

28. *Atropia in Phthisical Sweating*.—Dr. JAS. M. WILLIAMSON gives (*Lancet*, July 25th, 1874) the results of his experience in the use of atropia in sixteen cases at the Royal National Hospital for consumption, Ventnor.

"The sulphate of atropia," he says, "is best presented in pill, with extract of gentian; watery solutions are not to be depended upon, for they soon spoil by keeping. The first dose should in no instance be larger than one-eightieth of a grain, and, guided by the results, the dose may if necessary be increased to one-sixtieth, or even one-fiftieth of a grain; but if this latter quantity be exceeded, well-marked symptoms of poisoning will almost certainly ensue.

"In each of the sixteen cases in which the remedy was tried, the first dose produced a distinct effect on the perspiration, either wholly arresting it or materially diminishing it. In only one-fourth of the cases, however, was this effect direct and permanent; that is to say, only four patients, after using the pills for a varying number of nights, were able to omit the remedy without the sweating returning. But in these four the effect was lasting, for when seen two months after the cessation, each patient reported that he was still free from the slightest dampness. Of the remaining twelve cases, four found the benefit direct but temporary; that is to say, they obtained complete relief on those nights on which they took the atropia, but the perspirations returned if the pill was missed. In seven cases, although the eightieth of a grain at first diminished the sweatings, the dose had to be increased to maintain the effect. At last, however, the increasing habituation to the drug which characterized the sweats did not hold good of the toxic symptoms, for these became so marked that the remedy had to be abandoned in all the seven cases, without its having succeeded in putting a stop to the sweats in a single instance. Only one case remains, and here there appears to have been an unusual sensibility to the action of the drug. The eightieth of a grain distinctly lessened the profuse sweating each time it was tried, but after three or four attempts it had to be discontinued on account of the severe symptoms of poisoning to which it gave rise.

"It will thus be seen that the remedy controlled the perspirations more or less in the whole of the sixteen cases; that the effect was direct and permanent

in four; direct but temporary in four; beneficial but transitory in seven; and that it was inadmissible in only one instance. These results will be all the more striking when it is added that in many of the cases the sweatings had extended over a period of several weeks, and had resisted all the ordinary methods of treatment.

"The toxic symptoms most frequently complained of were intense heat and dryness of the throat during the night, and indisposition for bodily or mental effort on the following morning. Vomiting sometimes occurred, but diarrhoea was not observed. In one case there was retention of urine for several hours. The pupil was sluggish in action, but distinct dilatation was not common except in those cases where one-fiftieth of a grain was administered. The patients often complained of dizziness and inability to read any print but that of large type.

"It is well known that all efforts to check the night-sweats of phthisis too frequently fail; and although it is not urged that the sulphate of atropia is less uncertain than other remedies, it is believed that it will not be found inferior to them in obstinate cases, in some of which it was of much service after all other remedies had failed. The drug would probably prove of extreme value in combating the perspirations in those diseases (such as acute rheumatism) in which the sweating extends over a comparatively short period, and is not so inveterate as that in phthisis."

29. *Hydrophobia treated by the Intravenous Injections of Chloral.*—M. Bucquoy reported to the *Société Médicale des Hôpitaux* a case of rabies in a man following the bite of a rabid dog. Several injections of a solution of chloral in water were made into the right radial vein with temporary relief to the symptoms while under the influence of the chloral; but without warding off a fatal termination. On the autopsy no coagula were found in the veins. M. B. concludes that chloral acts like chloroform inhalations, during the sleep from which the rabid spasms are suspended, but that it is as fruitless for a cure as other remedies.—*Gazette Hebdom.*, 17th July, 1874, also *L'Union Médicale*, July 25, 1874.

30. *Treatment of Cholera by Subcutaneous Injection of Chloral Hydrate.*—The supplement to the *Gazette of India* of February 14th, 1874, contains a report on this subject from Dr. HIGGINSON, to Dr. HALL, the latter of whom claims the merit of having originated this method. In a letter to the Commissioner of Sitapur, dated October 18th, 1873, Dr. Hall states that, in the *Indian Annals of Medical Science* for March 1870, he advanced the theory that, in the collapse stage of cholera, there was intense irritation of certain sets of nerves; and that hence the use of sedatives was indicated. These, he recommended, should be given by hypodermic injection; it being of little use to give medicines by the mouth. Subsequently, having, in conjunction with Surgeon-major Collis, ascertained by experiment the powerfully sedative action of hydrate of chloral, he tried the remedy with success on a soldier in the collapse of cholera—recovery being established in about five hours. He gives the following direction for the use of the medicine.

"I attach great importance to the strength of the solution used (one part in 10 of water); if it is too strong, it probably will not be absorbed into the blood, and only cause ulceration or sloughing.

"The following is the plan of treatment that I recommend for the three stages of cholera. During the premonitory diarrhoea (which is almost always painless), 30 drops of dilute sulphuric acid in a large wineglassful of strong camphor-water every hour. If this does not stop it, and vomiting comes on, commence the hypodermic injection at once. If the patient is first seen in collapse, inject 10 grains dissolved in 100 drops of water in four or five different places, according to the size of the syringe. This will probably be enough; but, if reaction does not commence within an hour, inject again. There is generally a great craving for cold water, which may be given in any quantity. Never mind if the patient vomits; as reaction proceeds, he will retain it. But no opium or stimulants are to be given in collapse.

"After reaction, if secondary fever supervenes, quinia in varying doses, every one or two hours, may be given with milk, beef-tea, and mild stimulants."

Mr. Higginson, in his report to the Deputy Commissioner at Kheri, states that he has treated nineteen cases of cholera according to the method recommended by Dr. Hall, and that death had occurred in only two of these; one being a case in which the directions were not properly carried out, and the other an exceedingly severe and rapid case. The seventeen patients who recovered were in various degrees of collapse when first seen. Regarding the manner of administering the remedy, he says:—

"The injections were made in the arms and thighs, the canula of the syringe being plunged pretty deeply into the flesh. The greatest quantity of chloral used in any of my cases was sixteen grains, or eight injections. If the case was a bad one, four injections were made at once; then nothing was done for an hour, when the treatment was repeated if necessary. As a rule, sleep was induced within two hours. Nothing else was done except mulling (shampooing) the limbs, and giving occasionally some cold boiled water."

The result of the treatment is thus described by Mr. Higginson.

"Chloral hydrate, being a powerful sedative, soothes the irritated nerves, and so relaxes the contracted vessels; the blood is once more uniformly distributed, and consequently the pulse reappears at the wrist; the cramps and burning abdominal pains subside, sleep is induced, the respiration becomes regular, the discharges lessen, the face fills out, the voice becomes stronger, and the natural secretions are restored."

The success with which Mr. Higginson has met (the recoveries amounting to 89 per cent.) is certainly such as to encourage a further trial of the hypodermic injection of chloral hydrate in cholera. At the same time, much more extensive observation is required before any definite conclusion can be arrived at as to the value or inutility of the treatment. We shall watch with interest any additional observations on this important subject.—*British Med. Journ.*, Aug. 22, 1874.

31. *On Acute Rheumatism treated by Chloral Hydrate.*—The following interesting history of a very severe case of acute rheumatism occurring in a boy of H. M. S. *Cambridge*, is thus given by Staff-Surgeon A. IRWIN of the Royal Navy Hospital at Plymouth (*Navy Health Report*, 1874). The boy, aged 16, was admitted from H. M. S. *Cambridge* on November 26, 1872, suffering from acute rheumatism, engaging the wrists, elbows, knees, hands, and ankle-joints, with high temperature, but without cardiac complication. He was treated, as has been customary in this hospital, with a mixture containing bicarbonate, acetate, and nitrate of potass., in effervescence; and an alkaline lotion with opium, to the affected joints. He progressed favourably up to December 5, when he became exceedingly restless, and complained of much frontal pain, and his countenance wore an anxious expression. In the evening he was in a state of busy delirium, and symptoms of acute meningitis were conclusively present; at the same time all the articular symptoms disappeared. Enemata were administered, cold to the head, and blisters, without the smallest relief. He was supported carefully with milk, beef-tea, and a fair allowance of wine. His pupils were dilated and almost inactive. He was restless, and continually tossing his arms about. He continued about 48 hours in the above state, and on the morning of the 7th had been without sleep; his pulse was 152, and very weak; his temperature 102.6°. He was then ordered draughts containing twenty grains of chloral hydrate, with syrup of ginger; one to be taken immediately, the others at such intervals as might be required. Soon after taking the first draught the muscular twitchings, or tossing about, ceased, and he eventually fell into a quiet sleep. He passed the day and night tranquilly, taking his nourishment at intervals, and on the morning of the 8th was quiet, rational, and comparatively comfortable; but about 2 P. M. there was a return of the unfavourable symptoms (less in degree). He was given half a chloral draught, which quickly composed him, and from that time to the present there has not been any return of head-symptoms. The rheumatic affection relapsed, both knees becoming painful to the touch, and swollen. He steadily improved

from his extreme prostration, and was convalescing, but suffered from organic cardiac disease, which must unfit him for further service.

"He had no recollection whatsoever of the *Cambridge*, the ship from which he was sent into hospital, nor of any circumstance immediately preceding his illness. The case is remarkable—first, for its rarity; secondly, from the fact of the disease being almost invariably fatal; and thirdly, for the good effect produced by the administration of the chloral hydrate."—*London Med. Record*, July 15, 1874.

32. *Effect of Warmth in preventing Death from Chloral*.—Dr. T. LAUDER BRUNTON calls attention (*Journ. Anat. and Phys.*, May, 1874) to the "diminution of temperature which chloral induces, and the extraordinary effects of warmth in hastening recovery from its action, and preventing death from an overdose. The fall of temperature has been noticed by Liebreich and most other writers, but the effect of warmth applied to the animal's body has not, I think, received sufficient attention, although Dr. Richardson has pointed out its usefulness in preventing death. The diminution of animal heat is partly due in all probability to greater loss from the surface caused by the vessels of the skin becoming much dilated under the influence of the drug, and allowing the blood to be cooled more readily by a low external temperature. It is partly due also to the diminished production of heat which cessation of muscular action always causes, whether it be induced by simply tying down an animal so as to prevent motion, or by the administration of curare or narcotics.

"Professor Stricker having noticed that the animals on which he experimented often required a second dose of chloral to maintain anæsthesia, when they were wrapped in cotton-wool so as to prevent loss of heat, and still more when they were laid in a warm place, I made the following experiments at his suggestion. They show clearly that an animal wrapped in cotton-wool may recover perfectly from a dose of chloral which is sufficient to kill it when exposed to the cooling action of the air (which in the laboratory was about 20° C.), and that recovery from the narcotic action is much quicker when the temperature is maintained in this way, and still more rapid when the animal is placed in a warm bath. If the temperature of the bath is too high the animal may die from excessive heat, as I have shown in a former paper.¹

"The bearing of these experiments on the treatment of persons suffering from an overdose of chloral is so obvious as hardly to require any observations from me. The patient should be put to bed, and the temperature of the body maintained by warm blankets and hot-water bottles to various parts of the body, and especially the cardiac region. Warmth over the heart is an excellent stimulant to the circulation, which, like the respiration, is enfeebled by chloral, the heart, according to Rajewsky, being more or less paralyzed by the drug. If respiration threatens to fail, it should be maintained artificially, so as to allow time for the chloral to be excreted and the normal functions to be restored."

33.—*Hydrophobia; supposed Two and a Half Years' Incubation*.—Dr. FÉREOL, at a meeting of the French Academy of Medicine, on the 21st of July, read a long account, afterwards published in full in *L'Union Médicale*, July 30th, of the case of M. Durieux, a *pharmacien*, æt. 48, who was admitted in the *Maison de Santé* with symptoms of commencing hydrophobia, which speedily became confirmed. Death occurred on the third day, and beyond some cerebral and spinal meningeal congestion nothing special was found at the autopsy, which was performed with the greatest care. The patient stated that he had been bitten in the hand two years and a half ago by a mad dog, and subsequent inquiries have confirmed this statement.

M. Féreol, convinced that his patient died of true hydrophobia, reviews at great length the various affections with which this may be confounded. Treating of "nervous hydrophobia," he refers to a remarkable case which fell under M. Demarquay's notice. A student at the *Hôtel-Dieu*, having been greatly

¹ "On the Effect of Temperature on the Mammalian Heart and on the Action of the Vagus." *St. Bartholomew's Hospital Reports*, vol. vii. 1871.

affected by the suffering which he had witnessed in a patient dying of hydrophobia, had the misfortune as he was leaving the hospital to be himself bitten by a dog. He returned in a state of desperate alarm, and had the wound thoroughly cauterized, declaring that within six weeks he should return to die in a state of horrible suffering which he had just witnessed; and, accordingly, at the period indicated he did return with all the symptoms of hydrophobia developed. As he was still alive at the end of the forty-eight hours, when the patient whom he had seen had expired, M. Demarquay joked him, declaring that, as he had passed that period, he had not the disease, and had nothing to fear. These words inspired the youth with hope, his symptoms abated, and he recovered. That the patient was suffering in some analogous manner is rendered highly probable by a statement made by Baron Larrey at the next meeting of the Academy. During the siege of Paris, he observed, this M. Durieux (who, besides being a *pharmacien*, had a medical diploma) became well known to him as an applicant for employment in the ambulances. From the first he remarked his zeal and ardour, as well as his excited state and language. He seemed to seek to brave all perils in order to distinguish himself; and his excessive anxiety to obtain the Cross, and his tumultuous joy on succeeding, made a great impression on M. Larrey. "I lost sight of him afterwards," he observes, "always remembering him, however, as one of the most restless, the most agitated, and the most excitable beings with whom I had ever come into contact. Did he not then present a moral predisposition to the manifestation of the neurosis, which ended in a fatal hydrophobia? For my part, I should be disposed to regard his case, not as an example of rabies with an incubation of two years and a half, but as one of cerebral hydrophobia, or symptomatic of acute delirium provoked or aggravated by the coincidence of the bite of a dog presumed to be mad."

SURGICAL PATHOLOGY AND THERAPEUTICS AND OPERATIVE SURGERY.

34. *On the Bloodless Method.*—Prof. ESMARCH observes that since he first brought the subject before the third Surgical Congress, in Berlin, he has had the opportunity of trying his method in 200 additional cases, and that he now entertains a much higher opinion of its utility than he did then. Not wishing to weary his audience with mere statistical details, he yet feels desirous of pointing out the influence which he believes the method exerts in diminishing the mortality of large operations. Thus, of thirteen amputations of the thigh he has only lost one, and the same with respect to eleven amputations of the leg, while four of the upper arm all recovered—so that in twenty-eight of the greater amputations there occurred only two deaths. An amputation of the shoulder succeeded, but one of the hip-joint, which from the first was almost hopeless, failed; and of eight excisions of the large joints (three of the hip, three of the knee, and two of the elbow) only one terminated fatally. These are favourable results that cannot readily be surpassed. His clinical wards are contiguous to the medical wards, and both have long been overcrowded, and erysipelas, diphtheria, and pyæmia have been often met with. He is under the conviction that the more favourable results of the present year are due to the adoption of the bloodless method. This presents the following advantages:—

1. The small loss of blood which takes place. Every one is aware how convalescence is retarded and endangered when the loss of blood has been large. The production of acute anæmia here is the great danger. The coagulability of the blood augments in many cases with the impoverishment of the red globules, and with this increases the danger of thrombosis and pyæmia.
2. Sponges need not be brought in contact with the unbleeding surfaces. Although he has always been very careful not to use sponges that have not been thoroughly cleansed and disinfected, yet Dr. Esmarch has still suspected that they have still had something to do with transporting contagious material, and especially the poison of erysipelas.